

CLAIMS

We claim:

1. A method of deploying filters for use in processing audio signals, comprising:

calculating a filter for each of a plurality of frequency bands;

determining a distance between coefficients of filters in adjacent frequency bands;

and

merging filters with a shortest distance between coefficients.

2. The method of claim 1, wherein said filters are TNS filters.

3. The method of claim 1, wherein said coefficients are PARCOR coefficients.

4. The method of claim 1, wherein said merging involves calculating a new filter for a frequency range consisting of said adjacent frequency bands of said filters with said shortest distance.

5. A method of deploying filters for use in processing audio signals, comprising:

a) calculating a filter for each of a plurality of frequency bands;

b) comparing coefficients of filters in adjacent frequency bands to identify a pair of filters with a shortest Euclidean distance between coefficients;

c) merging said pair of filters;

d) repeating steps a) through c) until a predetermined number of total filters is reached.

6. The method of claim 5, wherein said coefficients are PARCOR coefficients.

7. The method of claim 5, wherein said merging involves calculating a new filter for a frequency band consisting of said adjacent frequency bands of said filters with said shortest Euclidean distance.

8. The method of claim 5, further comprising:  
after said predetermined number of filters is reached, recalculating at least one of said filters using only those frequencies corresponding to a strongest signal within a frequency range covered by said at least one of said filters; and  
using said recalculated filter for an entire extent of said frequency range.

9. The method of claim 8, wherein said strongest signal is identified based on energy/bin within said frequency range.

10. A method of deploying a filter for use in processing audio signals, comprising:

determining a first filter for a first frequency range;  
determining a second filter for a second frequency range, said second frequency range including said first frequency range;  
calculating a first Euclidean distance using coefficients of said first filter;  
calculating a second Euclidean distance between coefficients of said first filter and coefficients of said second filter;  
calculating a first prediction gain using said first filter;  
calculating a second prediction gain between said first filter and said second filter; and

if said second Euclidean distance is greater than said first Euclidean distance and said second prediction gain is less than said first prediction gain, then deploying said first filter for said first frequency range.

11. The method of claim 10, wherein said first and second filters are TNS filters.
12. The method of claim 10, wherein said coefficients are PARCOR coefficients.